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ABSTRACT

A self-rating scale was used with five mothers of preschool children with language impairments to determine whether the mothers' directive interactional style could be changed to a nondirective style without modeling or correction. Preliminary results indicated that viewing a videotape of a play session between the mother and child and completion of a self-rating scale led to interactional style changes within a single session and across three sessions. Two of the children, those with the mothers who had shown the greatest drop in directiveness, also showed a substantial increase in the number of communication acts. Allowing the parent to induce ways of changing their interactional style was seen as preferable to traditional modeling and correction. Bar graphs illustrate the study's conclusions. The self-rating questionnaire is appended, as are definitions and examples of directive and nondirective behaviors. Five references. (DB)

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A Nonintrusive Remediation Technique for Directive Maternal Behaviors

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The purpose of this study was to determine if maternal self-rating of interactions would decrease the percentage of directive behaviors during play with their language-impaired children. It has not been shown that a causal relationship exists between parental language interaction styles and children's language impairment. However, research does suggest that responsivity at least facilitates children's language development (Norris & Hoffman, 1990; Rosenberg & Robinson, 1988) and that parents of handicapped children are often more directive (Fey, 1986).

Past intervention studies which have focused on decreasing parental directiveness have used techniques such as didactic instruction and modeling. Johnson (1989) commented that "these techniques might be labelled 'intrusive' in a social sense because an outsider directly intrudes on the family's interaction pattern".

Self-rating, a type of self-evaluation, has been used to change behavior in the fields of counseling and education, and in fluency therapy in speech-language pathology. Bandura (1971) noted that "behavior can be self-regulated ... by self-evaluative responses to one's own behavior" and that self-monitoring can change and maintain behavior in the absence of external reinforcement. Self-rating may allow the individual to induce for him/herself the needed behavior change and may therefore be less intrusive than instruction and modeling.

Johnson (ASHA, 1989) conducted a pilot study using self-rating with low-income mothers whose children had normal communicative skills. Results indicated that maternal behaviors decreased significantly after self-rating for those mothers who initially evidenced a more directive style of interaction. The rationale for the longitudinal study reported here was to determine if repeated applications of Johnson's self-rating scale had a positive cumulative effect on the directive behaviors of mothers engaged in play with their language-impaired children.

Method

Subjects: Subjects who participated in all three treatment sessions were four mothers, aged 28 to 46 years. All subjects had some education beyond the high school level; mean number of years of schooling was 15.0. The children who participated with their mothers ranged in age from 2:5 to 4:9 years. Children's language delays ranged from 9 to 12 months; three of the children were enrolled in language therapy.

Videotaping of an initial play session provided a baseline measure of maternal directive and nondirective behaviors. Only mothers with a percentage of directive behaviors greater than 30% of combined behaviors were asked to continue their participation in the treatment program for two more sessions. Thus, four mothers did not qualify for further participation in the study.

Materials: The mothers and children were videotaped in small rooms equipped with child-sized furniture and a basket of toys. Sessions were videotaped from the far corner of the room using a hand-held Panasonic camcorder. Mothers viewed a portion of the videotapes on a black and white 10" screen television equipped with a videocassette player and headphones.

Procedure: At each session, mothers were instructed to play with their children as they would if they were at home with a little free time. The experimenter videotaped 8-10 minutes of mother-child play as unobtrusively as possible. Mothers were then asked to watch the middle 5 minutes of the videotape on the television. When the mothers finished viewing the tape, the researcher asked them to rate aspects of their interactions with their children. The mothers used the parental self-rating scale developed by Johnson (1989) to rate themselves on a seven-point Likert scale (in the handout). The questions were read aloud to reduce variability due to literacy. When mothers had completed the self-rating scale, they were asked to play with their children for approximately seven more minutes. The next two treatment sessions were scheduled at least one week but no longer than two and one-half weeks apart.

Analysis: The middle five minutes of the first portion of each session (pretreatment) and the first five minutes (excluding the first 30 seconds) of the second portion of each session (postttreatment) were used for data analysis. The number of maternal verbal and nonverbal directive and nondirective behaviors was tallied for each segment. Directive behaviors were defined as those in which the mother extended her own topic or introduced a new topic. Nondirective behaviors were defined as extensions of or responses to a topic introduced verbally or nonverbally by the child. (Examples are in the handout.) Each utterance and gesture was coded as a separate behavior.

Intraobserver reliability was established by recoding one-third of the videotapes one month after the first coding. A Pearson Product-Moment Correlation Coefficient was calculated which indicated a correlation coefficient of .97 between the first and second codings.

Results

A longitudinal single-subject experimental design (McReynolds & Thompson, 1986) was used. This allowed researchers to investigate whether directive and nondirective maternal behaviors for each subject changed significantly (1) by the conclusion of treatment, when compared with baseline measures; (2) within treatment sessions; (3) from one pretreatment session to the next. Frequency data were converted to percentages and are presented (on the overhead) for the dyads who participated in all three treatment sessions.

The mother in Dyad 1 (Figure 1) used primarily nondirective behaviors in the Pretreatment segment of Session 1 (Pre1) and showed little change following self-rating. During Session 2, she used a higher percentage of directive acts during the Pre1 segment, showing little carryover from Session 1. Directiveness

did decrease during the Post2 segment. Carryover was more evident in Session 3 where the percentage of directive acts remained under 30% pre and post. Directiveness was low overall but rose slightly during Session 3. From the Pre1 to Post3 segments, this mother's use of directive acts decreased by 12%.

The mother in Dyads 2 and 6 (Figures 2 and 3) both used approximately equal percentages of directive and nondirective acts at Pre1. The Dyad 2 mother showed a fairly steady drop in directiveness following each treatment for the first two sessions and maintenance of a low percentage of directives at Pre3 with little change to Post3. Directiveness declined overall by 37%. The Dyad 6 mother's directiveness declined markedly following one treatment application and remained low during Sessions 2 and 3. This mother's directiveness declined overall by 42%.

The mother from Dyad 7 (Figure 4) used the highest percentage of directive acts of any of the mothers during the Pre1 segment. Use of directive acts decreased markedly (by 37%) at the Post1 segment and remained at a fairly steady level until the Post3 segment, where use of directive acts rose. One of this mother's older children observed Session 2 and both of her older children observed Session 3; while these children did not participate in play interactions, their presence may have been distracting. Use of directive acts dropped overall by 13% for this mother.

Data taken on the one session in which the mothers who did not qualify for participation in all three sessions took part is summarized in Figure 5. These mothers had baseline levels of directiveness ranging from 19% to 6%; following treatment, directive acts decreased by 6% or less for three of these mothers and rose by 11% but remained under 30% for one mother.

Discussion

Results indicate that the overall effect of treatment (viewing the videotape and using the parental self-rating scale) was a decrease in directiveness for those mothers who initially used as many or more directive as nondirective behaviors. The data from Dyads 2 and 6 supports this conclusion most dramatically. Treatment also appeared to have an immediate effect (change from Pre1 to Post1) and a carryover effect (change from Pre1 to Pre2 and 3) for these mothers. These results support those of Johnson's pilot study and suggest that the self-rating procedure is effective for some mothers of both normal and language-impaired children.

As anticipated, this treatment program appeared to have little effect on the behavior of those mothers who already used a high percentage of nondirective behaviors. Johnson (1989) also found that the parents in her study who began with a high level of nondirectiveness (>70%) did not change as a result of treatment. These findings lend support to the conclusion that the self-rating procedure does indeed target parental directiveness.

The focus of this particular study was change in maternal communication. However, the underlying objective was to improve children's communicative skills. Therefore, a gross measure of child communicative acts was taken. This measure consisted of a total of the number of intentional communicative gestures (reach,

give, show, point, take away) plus the total number of vocalized or verbalized utterances. The number of child communicative acts at the Pre1 segment was compared to those at the Post3 segment. Over the course of the study, the children in Dyads 2 and 6 showed an increase of 51% and 28%, respectively, in their use of communicative acts. We have already observed that it was the mothers from these dyads that showed the most pronounced and consistent drop in directiveness. Mirroring the apparent reduced effect of treatment on mothers from Dyads 1 and 7, the Dyad 1 child showed a 0% increase and the Dyad 7 child a 13% decrease in use of communicative acts.

While conclusions about the effectiveness of this treatment program must be treated with caution because of the small number of subjects used in the study, this intervention technique merits continued investigation. Indeed, a number of follow-up studies are being conducted. The treatment method will be varied so that parents either watch the videotape of themselves playing with their children or only use the self-rating procedure. Results of this study should aid in determining whether changes in parental behaviors following treatment are solely due to watching the videotape or to self-rating. Other follow-up studies will explore the effectiveness of this treatment procedure with other groups, i.e., mothers of developmentally delayed preschoolers and teenage mothers of normal language-learning children.

It is hoped that this treatment technique will be useful to practitioners who wish to change directive styles of parental interaction without use of direct remediation. Teachers, therapists and aides might also benefit from self-rating of play interactions. The ultimate goal of such intervention is that it will foster language development in language-impaired children by altering their communicative environment.

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Figure 1. DYAD 1: Pre- and post-treatment percentages for directive and nondirective acts.

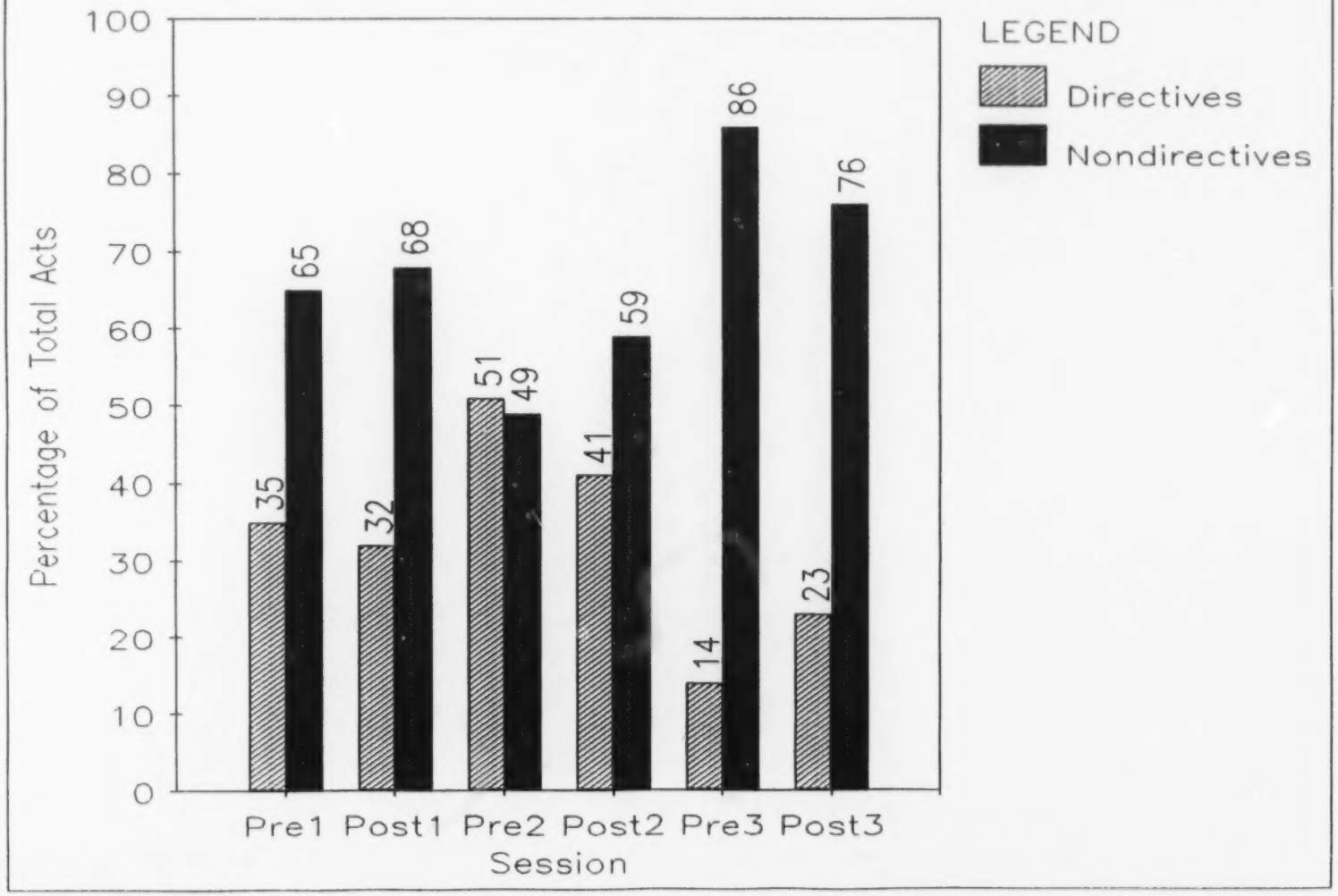


Figure 2. DYAD 2: Pre- and post-treatment percentages for directive and nondirective acts.

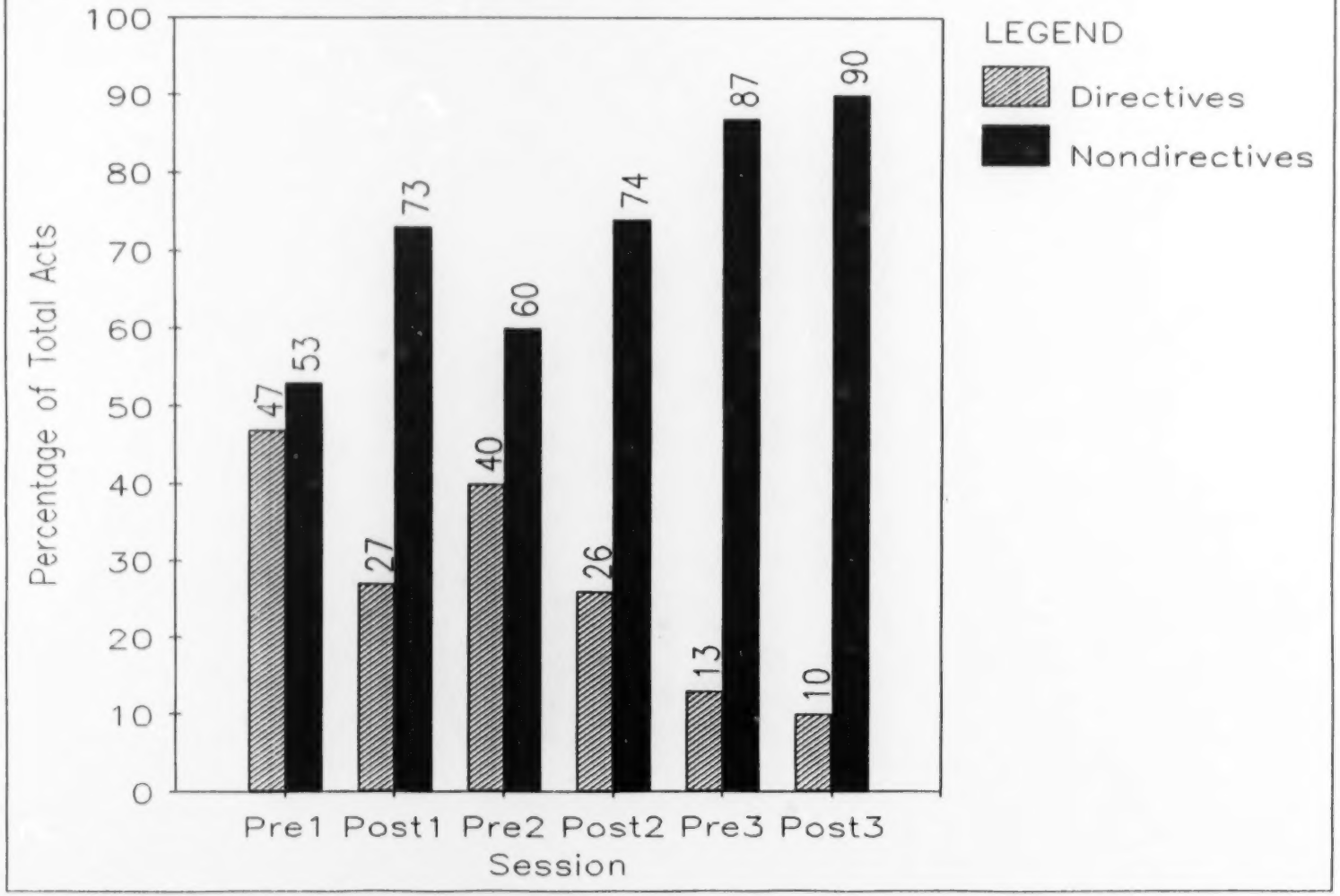


Figure 3. DYAD 6: Pre- and post-treatment percentages for directive and nondirective acts.

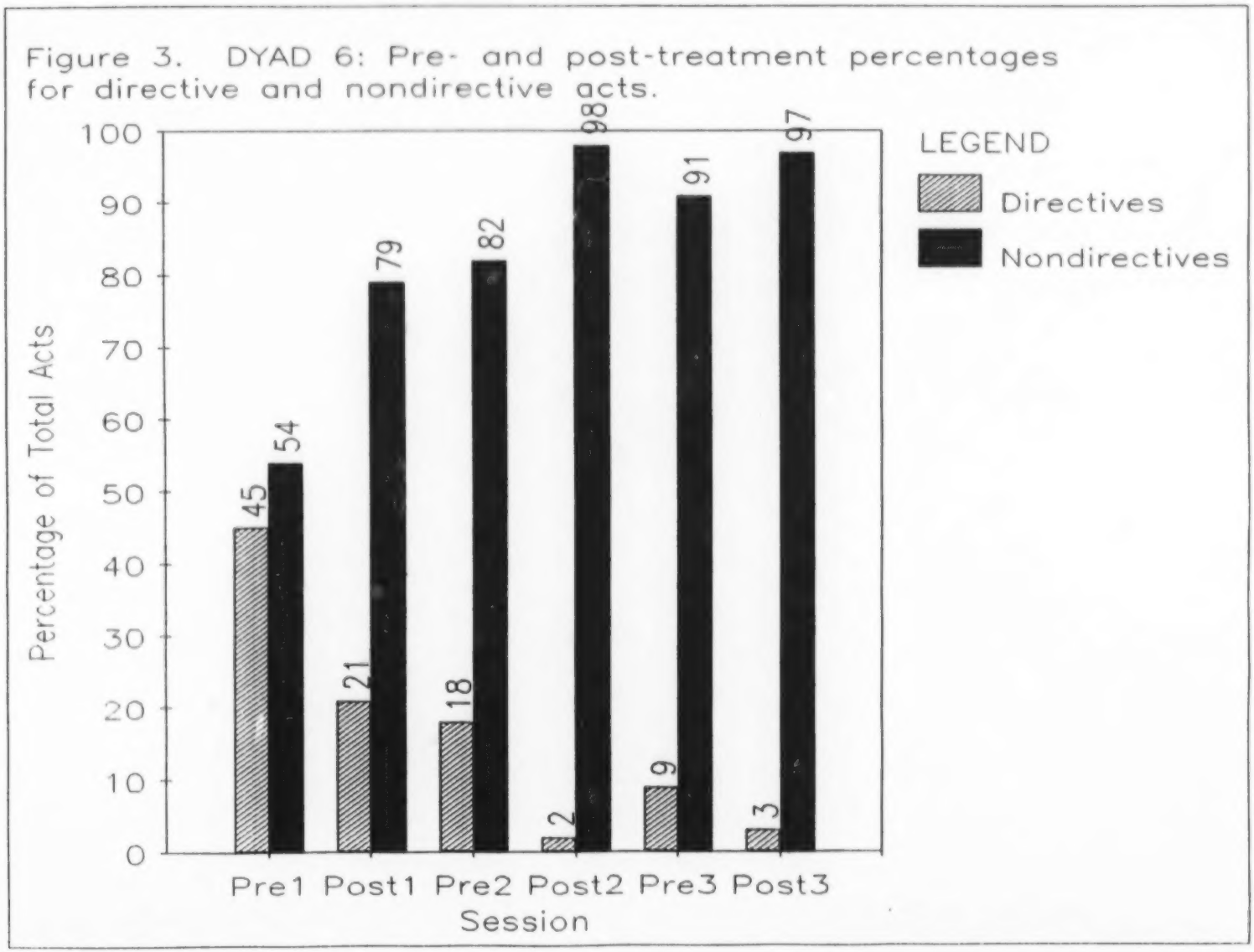


Figure 4. DYAD 7: Pre- and post-treatment percentages for directive and nondirective acts.

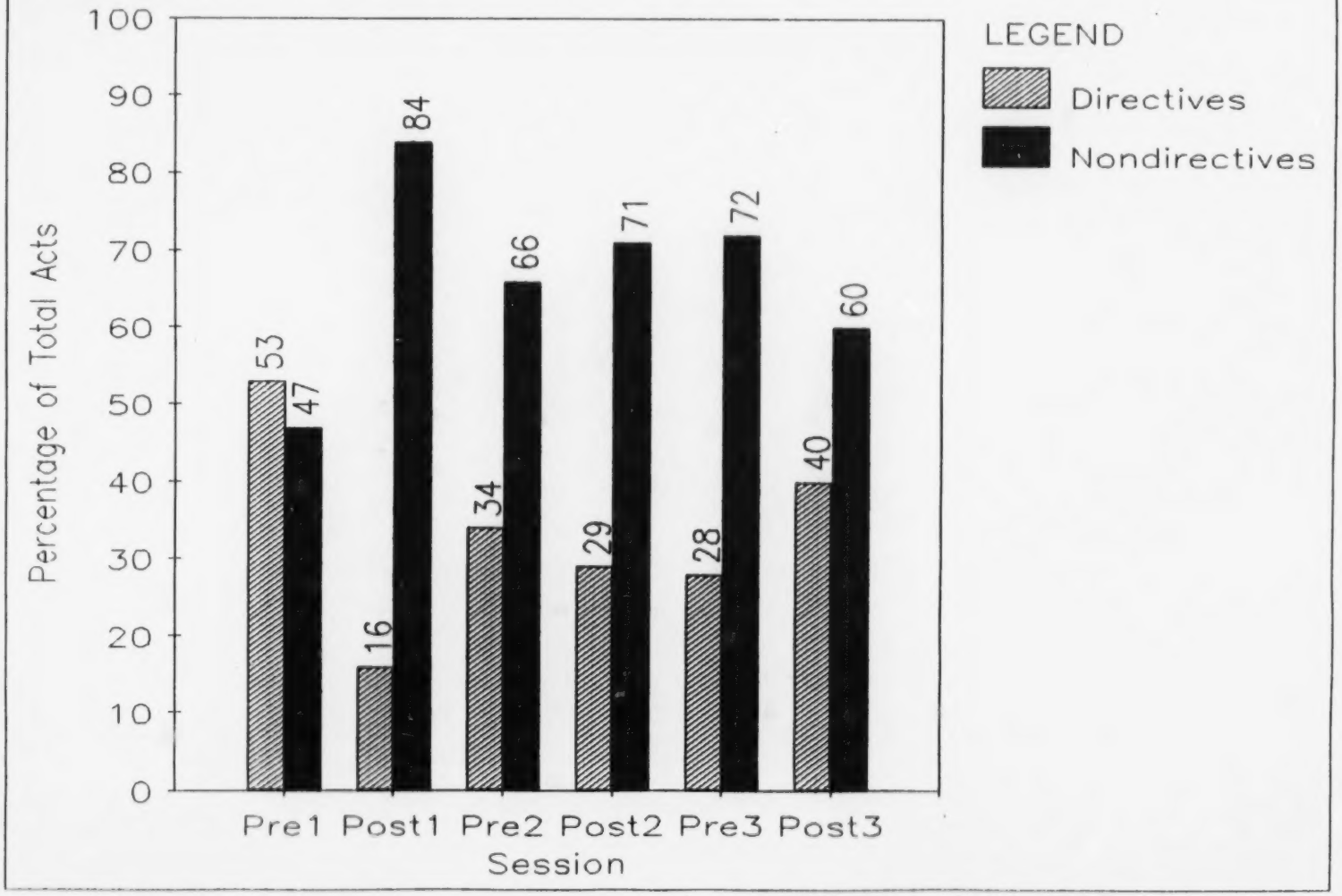
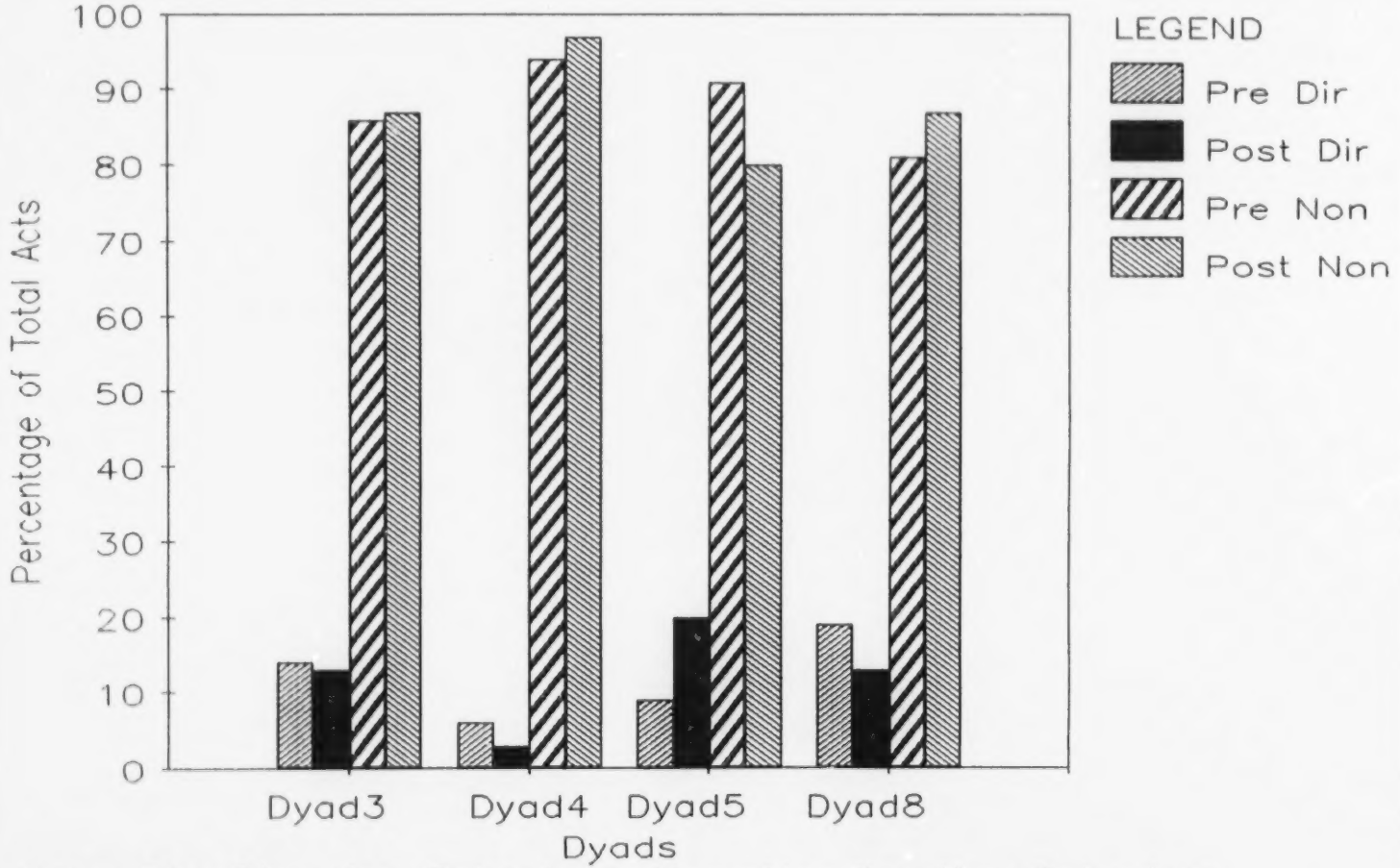


Figure 5. Pre- and post-treatment percentages for directive and nondirective acts for mothers with <30% directive behaviors.



Note: Dir=Directive Behaviors; Non=Nondirective Behaviors

APPENDIX A

Rating Questions
Parent-Child Interactions*

1. Overall, how good are you at talking and playing with your child?
2. How interested were you in what your child was doing?
3. How interested was you child in what you were doing?
4. How much did you talk to your child?
5. How much did you child talk to you?
6. How much did you talk about the toys?
7. How much did your child talk about the toys?
8. How much did you talk about what you were doing?
9. How much did your child talk about what you were doing?
10. How much did you enjoy playing with your child?
11. How much did your child enjoy playing with you?
12. How much did you tell your child what to do?
13. How much did you let your child tell you what to do?
14. How typical do you think this 10-minute tape is?

* From JOHNSON, J. (1989). A nonintrusive intervention technique for mother-child interactions. Paper presented at the annual convention of the American Speech-Language-Hearing Association, St. Louis, MO.

APPENDIX B

Definitions and Examples of Directive and Nondirective Behaviors*

Directive Utterances and Gestures: These include extensions of the mother's own topic when child response is minimal or was the introduction of a novel topic.

Nondirective Utterances and Gestures: These include maternal extension of a "topic" introduced or obviously extended by the child.

Example: (M = mother; C = child)

M:	(touching ball behind C) "Hey, what's this?"	= Verbal Directive
C:	"Ball!"	
M:	"Yeah, a ball."	= Verbal Nondirective
C:	(picks up ball)	
M:	(shakes rattle)	= Nonverbal Directive
C:	(ignores M, picks up phone)	
M:	(picks up other phone)	= Nonverbal Nondirective

*From JOHNSON, J. (1989, November). A nonintrusive intervention technique for mother-child interactions. Paper presented at the annual convention of the American Speech-Language Hearing Association, St. Louis, MO.

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Rating Scale Score Sheet

1.	Not very 1	2	3	4	5	6	Very Good 7
2.	Not very 1	2	3	4	5	6	Very 7
3.	Not very 1	2	3	4	5	6	Very 7
4.	Not much 1	2	3	4	5	6	A Lot 7
5.	Not much 1	2	3	4	5	6	A Lot 7
6.	Not much 1	2	3	4	5	6	A Lot 7
7.	Not much 1	2	3	4	5	6	A Lot 7
8.	Not much 1	2	3	4	5	6	A Lot 7
9.	Not much 1	2	3	4	5	6	A Lot 7
10.	Not much 1	2	3	4	5	6	A Lot 7
11.	Not much 1	2	3	4	5	6	A Lot 7
12.	Not much 1	2	3	4	5	6	A Lot 7
13.	Not much 1	2	3	4	5	6	A Lot 7
14.	Not very 1	2	3	4	5	6	Very 7

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